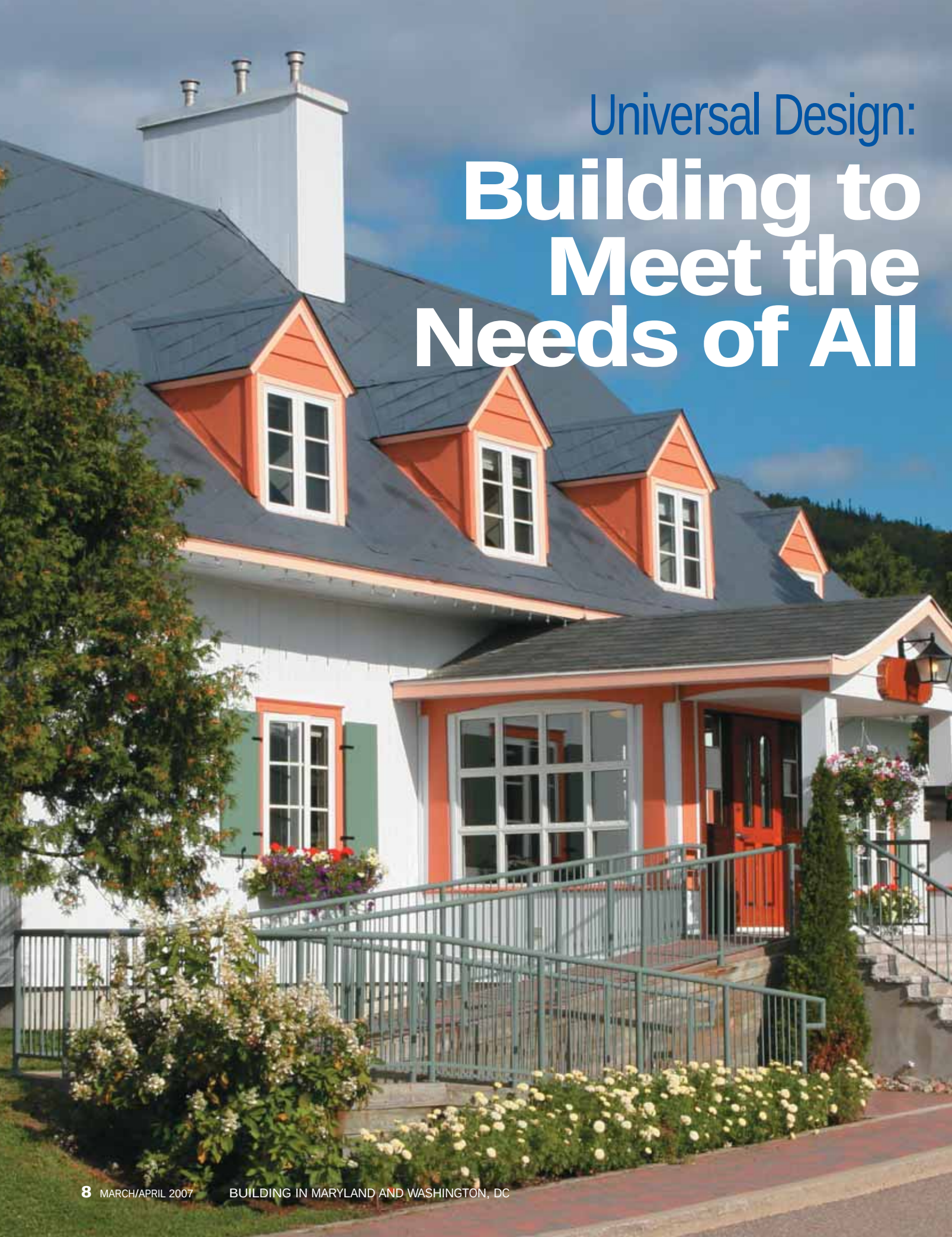

Universal Design: Building to Meet the Needs of All

By Mary Lou Jay

If the words "accessible housing" evoke images of institutional bathrooms and hospital-style corridors it's time to take another look. Using the principles of universal design, builders today are creating beautiful, accessible, easier-to-live-in homes that appeal to buyers of all ages and abilities.

Universal design is "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design," according to the Center for Universal Design at North Carolina State University.

"Universal design is more of a philosophy than actual guidelines," explains Charlotte Wade, a Certified Aging in Place Specialist (see sidebar) and consultant with Vitadomas. "It is a way of looking at and designing an environment that people can live in regardless of age or capabilities." Homes incorporating the principles of universal design may include features like zero step entries, wide doorways and kitchen countertops of varying heights that can accommodate people who sit and stand as they work.

Design for Every Ability

Advocates of accessible housing were among the first proponents of universal design. "Many earlier "accessible homes" were built using plain institutional design," comments Jackie Simon, a realtor with Avery Hess Realty and a member of the Montgomery County Commission on People with Disabilities.

Now baby boomers are demanding well-designed, accessible homes. "We can be independent much longer if our homes are designed with safety and universal design in mind,' Simon adds.

But universal design isn't just about making homes more workable for just the disabled and the elderly. A 0-step entry is just as useful for a mother pushing a stroller into a house as it is for a grandfather who's coming to dinner in a wheelchair. While wider front doors and corridors accommodate someone in a walker, they also make it easier for deliverymen to get a new wide screen television or bulky sofa to the family room.

Photo by Alan Goldstein

Building a Universal Design Home

Last fall, MNCBIA member Centex Homes completed a Universal Design Demonstration House in Bristow, VA.

The home offers an on-grade entrance from the driveway to the porch, a no-step entrance, and a 36 inch wide front door opening with a 24" hinged side door that swings open to create a 60-inch opening when needed. All interior doorways are 36 inches wide and hallways are 60 inches wide. Other enhancements are lever door handles, rocker switches located at 42 inches from the floor, rollout and pull-down shelves in kitchen cabinets, side-hinged oven door, and easier-to-climb stairways with 7" high risers and 12" deep treads. The house even includes enough space in the pantry so that an elevator can be installed later.

Building a universal design home does involve adjustments to construction practices and some added expense, says Frank Disbrow, Centex Homes' special assignments manager. "The zero entry doors were the most difficult, because we had to re-engineer the concrete wall. We dropped the floor joists down their full height so that they were level with the top of the concrete foundation. We had to dig the foundation deeper so that the basement walls are tall enough that people aren't bumping their heads on the floor joists." The company increased the width of the foundation wall from eight inches to 12 inches, which allowed for a 4-inch ledge on the interior.

"The foundation was a considerable difference in cost, probably about 50 percent more," Disbrow adds. Other changes — like moving the light switches down and raising electrical plugs — required a different kind of adjustment. "We basically re-educated the whole subcontractor base. The production building industry is programmed; we go through this, this and this and then we're done. But in this house everything is done differently. It wasn't extremely difficult, but it did take close supervision and gentle reminding.

"One valuable lesson we learned from this whole thing was that this process starts when you pick the lot you're going to build on, because of the foundation complexity and driveway complexity and things like that," he continues. "It takes a lot of forethought and preplanning. In a traditional building, you can lose one-quarter inch here and there and there's no problem. But with universal design, every quarter-inch counts."

Still, Disbrow believes that the demand for universal housing is likely to grow in the future. "As market awareness and market demand increase, you'll see more of it. It's beneficial in many ways — not necessarily for every buyer, but I think that more and more people can see the appeal.

"The reception that we got at the grand opening leads me to believe that there are more than a couple of people out there who would love to have this."

Photos by Alan Goldstein

Designing for Life

Some homebuilders are gradually adding universal design elements into their homes, but for some, the change has not come quickly enough. The Montgomery County Commission on People with Disabilities approached the Maryland-National Capital Building Industry Association (MNCBIA) in 2003, proposing legislation that would mandate that a certain percentage of all new homes in Montgomery County be wheelchair accessible.

"The Commission wanted to make zero-step entries a mandatory feature in all new construction, regardless of a site's physical reality or topography of the county and the regulatory and physical restraints that would conflict with such a mandate," says Raquel Montenegro. She is MNCBIA's associate director of legislative affairs and staff liaison to the "Design for Life" working group.

After some initial discussions, "the Building Industry Association and the Commission on Disabilities came to realize that the best thing they could do was create a volunteer program and make it attractive to everybody," says John Stovall, partner in NSArchitects and chair of the Design for Life committee. Representatives of MNCBIA and the Commission worked together for more than three years to develop the program standards.

The group put together a voluntary recognition for builders who incorporate designs to accommodate two levels of accessibility: visitability and livability.

Visitablility, the first level, allows disabled people to visit a home. "It involves having one entrance without steps, doors that are at least 32 inches wide, and a circulation path 36 inches wide to a visitable room and a powder room," explains Stovall. The powder room must have a door wide enough to fit a wheelchair, and a 30-inch by 48-inch space where the chair can sit with the door closed.

"If you don't have a room like that and someone in a wheelchair wants to use the bathroom, the person has to be assisted, and it's often uncomfortable. It's a matter of dignity," Stovall adds. To achieve the second level, livability, the house needs an accessible bathroom, bedroom and kitchen.

A builder who wants to receive the Design for Life certification

Remodelers Receive Assistance With Older Market

Although some boomers want to move to new homes after the children are gone, many more want to spend their later years in familiar surroundings. AARP's "Fixing to Stay" study, conducted in 2000, found that 83 percent of people aged 45 or older hoped to remain in their current residence for as long as possible. To do so, these homeowners will require changes in their homes' layouts and features so that they can live there safely, independently and comfortably.

To help remodelers understand and meet the special needs of this fast-growing population, the NAHB offers the Certified Aging in Place Specialist (CAPS) program. Developed in conjunction with the NAHB Research Center, NAHB's 50+ Housing Council and the AARP, the program provides strategies and techniques for designing, building and marketing homes to older adults.

The CAPS program is open to remodeling professionals and to general contractors, designers, architects and consultants who are interested in aging-in-place issues. Participants take three classes available through their local associations or at national meetings: *Working With and Marketing to Older Adults, Home Modifications* and *Introduction to Business Management*. After achieving the designation, participants must take an additional 12 hours of courses every three years to maintain it.

Through the CAPS certification program, remodelers can gain valuable insights into this burgeoning market. In addition, the CAPS certification itself serves as a marketing tool, since the NAHB and the AARP Web sites allow consumers to search for a CAPS specialist in their area.

For more information about the CAPS certification program, visit the NAHB Web site at http://www.nahb.org.

"The Building Industry Association and the Commission on Disabilities came to realize that the best thing they could do was create a volunteer program and make it attractive to everybody"

will submit drawings for the home to the Montgomery County Department of Permitting for review. After construction, the house will be inspected to insure that it has met the design standards and will then be given final approval for certification. The Design for Life committee hopes to eventually have marketing brochures and stickers available to participating builders. The group has asked MNCBIA to hold educational programs for homebuilders that will explain the program, the standards and the long-term benefits.

Stovall believes that the Design for Life program will encourage contractors to consider building more accessible homes. "Having a Design for Life certificate would be another plus, a marketing advantage for a new house," he says. "Not every house would be eligible, but they could identify homesites that could be available for this."

Barriers Can Be Overcome

Simon, who served on the Design for Life committee, believes that builders who give the program a try will not have a problem finding buyers for their accessible homes. "They [builders] have been told that people don't want to be reminded that they are getting older or frail. But if they offer no-step entries available on certain lots, and they have a good design, builders will have many people flocking to their houses, because people would much prefer to have the choice of staying in one place all their lives.

"We know from all the research that people don't want to move to Florida any more; they want to stay where their doctors are, where their pharmacists know them. If their home facilitates that, it's wonderful because they don't have the expense and emotional turmoil and upheaval of moving."

Marketing need not be limited to people with disabilities. "This new design is great for everybody in your family."

That's the real beauty of universal design. "If you go into a well-designed wheelchair accessible space, you don't even realize it's designed to be accessible," says Simon. "What you see are beautiful materials and open, inviting space that accommodates everybody." ■

Baby Boomers Want to Stay Put — Homes Get Better With Age

A majority of people 50 and older want to stay in their homes for the foreseeable future and plan improvements or a remodel during that time, according to a new study conducted by Focalyst for The Home Depot, a member of the National Council of the Housing Industry. Data from more than 30,000 consumers from the baby boom generation and older comprised the study.

Key home improvement findings for consumers 50 and older include:

- 60 percent expect to live in their current residence during the next five years.
- 65 percent plan to remodel or improve their homes.
- 42 percent of all home improvement projects will be done by outside contractors.
- 77 percent believe that how their home looks is an important part of who they are.
- 73 percent say that the kitchen is their most important room.

Home owners of any age can benefit by incorporating innovative designs into their home improvement plans, says Home Depot, creating not only a stylish environment reflecting their lifestyle, but also a safe and comfortable home for years to come.

Following are home modification suggestions for two key areas of the home — the kitchen and the bath — that can create a safe and comfortable home for years to come

In the kitchen:

- Under-cabinet task lighting brightens countertops, reducing eyestrain.
- Pull-down shelving improves pantry access.
- Slide-out drawers eliminate the need to twist or bend for pots and pans.
- Elevated dishwashers reduce stooping or bending.
- D-shaped cabinets and drawer handles are easier to grasp.
- Anti-scald devices reduce the risk of hot water burns.
- A 36-inch countertop height reduces back strain and promotes easier access.
- Adjustable countertops offer added flexibility and more convenient access.
- Softer, natural flooring reduces back and foot strain for periods of standing.

In the bath:

- Motion-sensing faucets are ideal for those with arthritis.
- Sinks and vanities should be placed at a comfortable height.
- Level handles on faucets and doors are easier to use at any age.
- Smooth counter edges prevent bumps and bruises.
- Strategically placed grab bars in the shower reduce the risk of falling.
- A 17-inch toilet height offers maximum ease and comfort.
- Bath and shower chairs add extra comfort and convenience.

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